



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,830	08/30/2001	Johannes Wilhelmus Maria Sonnemans	ACH2823 US	9198
56744	7590	04/19/2006	EXAMINER	NGUYEN, TAM M
HOWREY LLP c/o IP Docketing Department 2941 FAIRVIEW PARK DRIVE SUITES 200 & 300 FALLS CHURCH, VA 22042			ART UNIT	PAPER NUMBER
			1764	
			DATE MAILED:	04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/942,830

Filing Date: August 30, 2001

Appellant(s): SONNEMANS ET AL.

MAILED

APR 18 2006

GROUP 1700

Frank C. Eymard
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 7, 2006 appealing from the Office action mailed June 28, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,251,263	HATANAKA et al.	6-2001
EP 0357295	TAKAHASHI et al.	3-1990
4,845,068	TAKAHASHI et al.	7-1989
EP 0289211	TAKAHASHI et al.	2-1988

(9) Grounds of Rejection

For simplification, the examiner withdraws the rejection of claims 1, 7-12 and 18-28 under 35 U.S.C. 103(a) as being unpatentable over Baird et al. (5,935,420) in view of either Takahashi et al. (4,845,068), Takahashi (EP-0357295 A2), or Takahashi (EP-289211 A1).

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 7-12 and 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatanaka et al. (6,251,263) in view of either Takahashi et al. (4,845,068), Takahashi (EP-0357295 A2), or Takahashi (EP-289211 A1).

Hatanaka discloses a hydrodesulfurization process by contacting a hydrocarbon feedstock having a boiling point of from 220-380° C with a catalyst in reaction zones. The reaction zones are operated at a temperature of from 320 to 420° C, at a pressure of from 5 to 15 MPa (50 to 150 bar), at an LHSV of 0.5 to 3h⁻¹, and at a hydrogen/oil ratio of from 1000 to 5000 scfb. Hatanaka also discloses that the feedstock comprises alkyl-benzothiophenes and the product has a sulfur content of about 1-50 ppm (.0001 - .005 wt.%). The catalyst comprises a metal of Group VIII (e.g., Ni or Co) and Group VIB. (See page; abstract; col. 4, lines 25-28, 42-56; col. 7, lines 44-59)

Hatanaka does not disclose that the feed contains 150-500 ppm of sulfur. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Hatanaka by using a feed contains the claimed amount of sulfur because it appears that a feed containing any amount of sulfur greater than 0.005 wt.% of sulfur can be used in the process. Since the process is effective to reduce sulfur to less than about 50 ppm

(.005 wt%), it would be expected that the results would be similar when using a feed containing the claimed amount of sulfur.

Hatanaka does not disclose that the catalyst comprises sulfur-containing organic additive. However, Takahashi (all three references) disclose a hydrodesulfurization process wherein the process employed a catalyst comprising metals of group VIB, VIII, and mercaptocarboxylic acids (See abstracts of all three references). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Hatanaka by adding sulfur containing additive to the catalyst as taught by Takahashi because adding a sulfur containing additive to the catalyst would enhance the catalyst activities and would requires neither presulfurization nor heat-treating. (See the abstract; page 3, lines 24-25 of EP-0357295 A2; col. 2, lines 30-36 and col.3, line 58 through col. 4, line 33 of Takahashi'4,845,068; The abstract of EP-0289,211)

(10) Response to Arguments

The argument that the Takahashi references do not deal with ultra deep hydrodesulfurization and; therefore, one of skill in the art would not combine the process of Hatanaka with those of the Takahashi references is not persuasive. Hatanaka teaches an ultra-deep hydrodesulfurization process wherein the final product has a sulfur content of from 0.0001 to 0.005 wt.% (1 – 50 ppm) as claimed. Takahashi teaches that adding a sulfur-containing additive to a desulfurization catalyst would enhance the catalyst activities and would requires neither presulfurization nor heat-treating. Therefore, one of skill in the art would add a sulfur-containing additive to any hydrotreating catalyst including the catalyst of Hatanaka. (See the abstract; page

Art Unit: 1764

3, lines 24-25 of EP-0357295 A2; col. 2, lines 30-36 and col.3, line 58 through col. 4, line 33 of Takahashi'4,845,068; The abstract of EP-0289,211)

The argument that it is inoperable when combining the Hatanaka reference and the Takahasi references because Hatanaka reference utilizes three different catalysts whereas all of the Takahasi references employ only one catalyst is not persuasive. The examiner modified the process of Hatanaka by incorporating sulfur containing additive into the catalysts of Hatanaka. The examiner does not replace the catalysts of Hatanaka with the catalysts of Takahasi. It is reminded that all the catalyst beds of Hatanaka comprising metals of Group VIII and VIB as the claimed catalyst. Also the claimed process does not exclude the use of more than one bed of catalyst.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Tam Nguyen

Tam

3/31/06

Conferees:

Glenn Calderola

N.C.

Glenn Calderola
Supervisory Patent Examiner
Technology Center 1700

Nadine Norton

N.

EXAMINER